



DEK NeoHorizon

Agenda



Introduction



Maximum flexibility for your print requirements



Maximizing your print process quality



Certified wet print accuracy as standard



High performance offers a top throughput



Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

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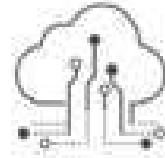


Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

PEOPLE, PROCESSES, EQUIPMENT AND MATERIAL IN THE INTEGRATED SMART FACTORY



PEOPLE
Relief from
routine tasks



MATERIAL
Optimized
material logistics



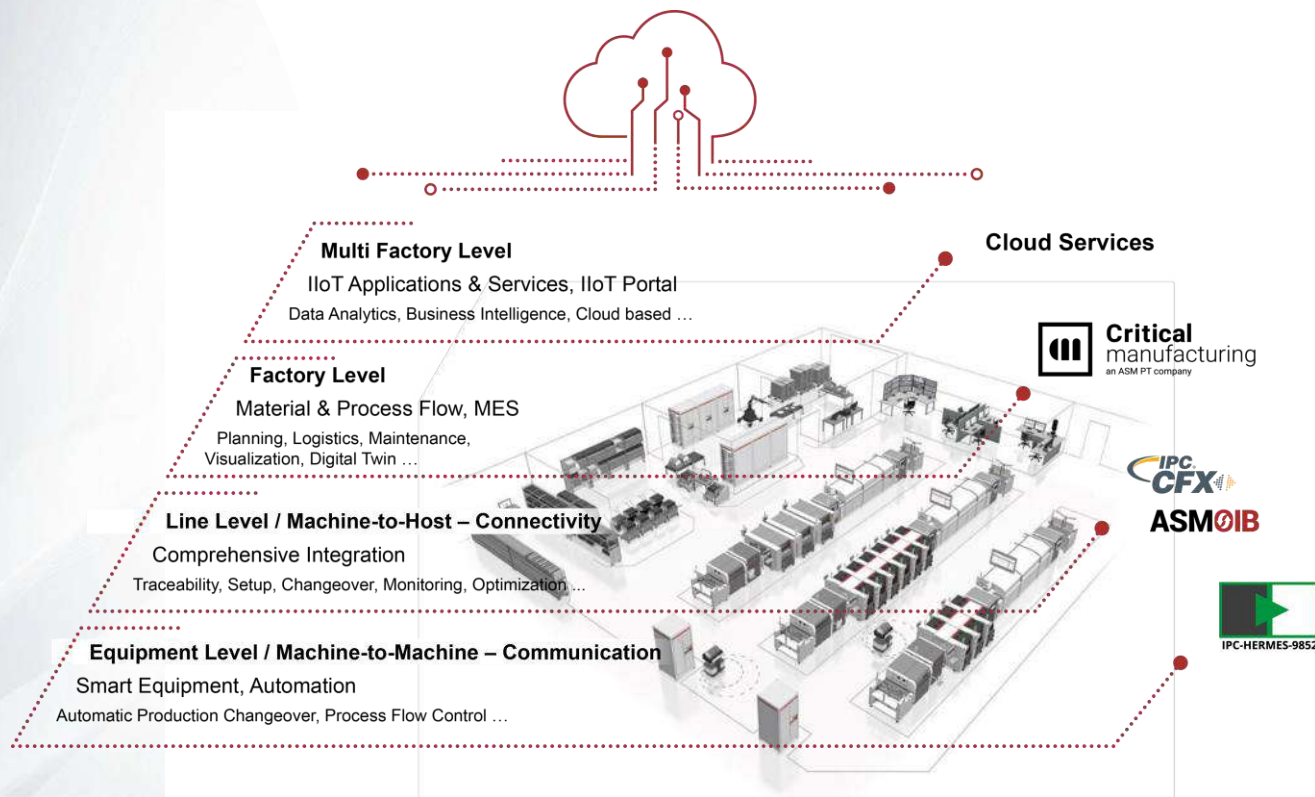
EQUIPMENT
Maximum
availability



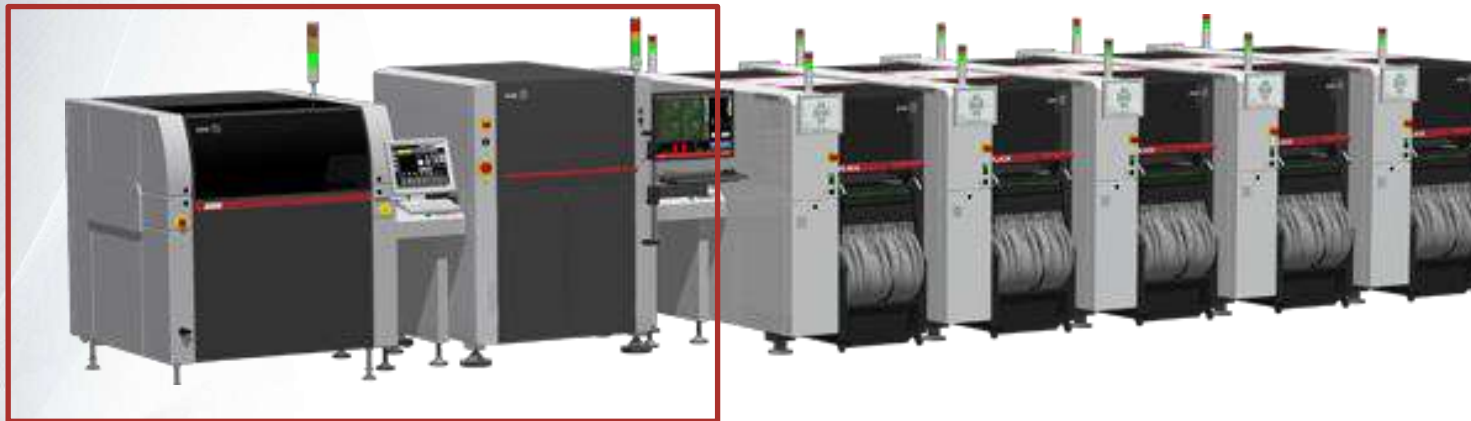
PROCESSES
Autonomous
process optimization



THE INTEGRATED SMART FACTORY DATA MAKE THE DIFFERENCE



UNMATCHED PRINTING KNOW-HOW



DEK

With its brand DEK ASM is one of the leading printer equipment supplier for the SMT and Chip Assembly



ASM is the world's largest stencil manufacturer (all types and technologies)



ASM is the only printer partner offering all materials around the print process from high quality PCB support solutions to all process support products



ASM ProcessLens is the most advanced SPI solution and with ProcessExpert, the first solution for fully automated print process optimization

MAIN REQUIREMENTS BY SEGMENTS



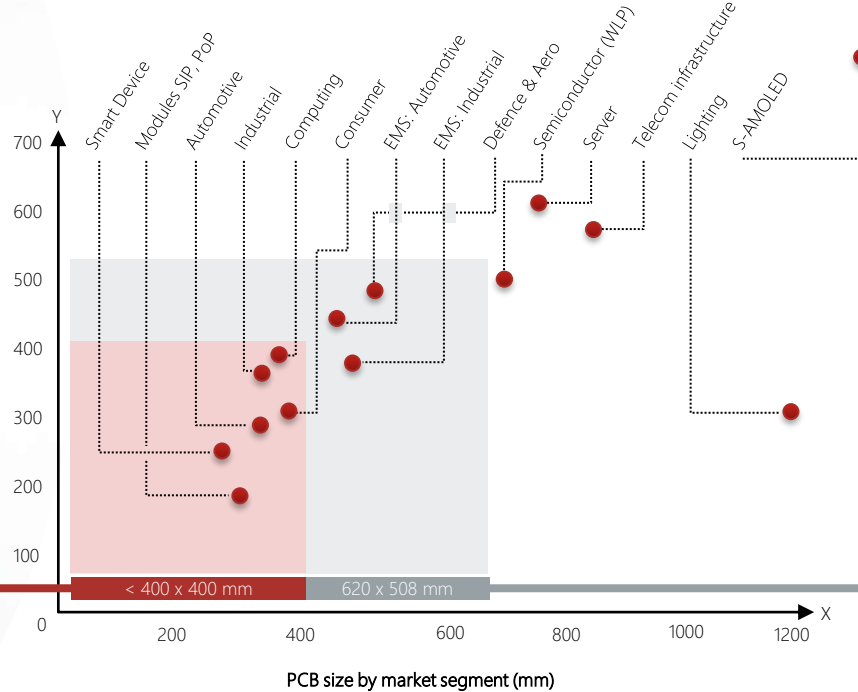
DEK TQ

Ultra high volume
& high flexibility

5 sec / ≤ 262 PCB/h
400 x 400 mm
> 2 C_{pk} @ $\pm 17.5 \mu m$ (± 6 Sigma)



Focus on: High performance



DEK NeoHorizon Series

Highest volume
& high flexibility

6.5 sec / ≤ 244 PCB/h
620 x 508.5 mm
> 2 C_{pk} @ $\pm 20 \mu m$ (± 6 Sigma)



Focus on: Flexibility

THE ASM PRINTER PORTFOLIO

ASM Printer portfolio

Flexible Performance



DEK NeoHorizon 03iX

8 sec / ≤ 215 PCB/h
620 x 508.5 mm
Wet print accuracy:
2 C_{pk} @ $\pm 25 \mu\text{m}$ (± 6 Sigma)



DEK NeoHorizon 01iX

6.5 sec / ≤ 244 PCB/h
620 x 508.5 mm
Wet print accuracy:
2 C_{pk} @ $\pm 20 \mu\text{m}$ (± 6 Sigma)



High performance & flexibility

DEK TQ L

6.5 sec
Max. PCB size: 600 x 510 mm



Maximum Performance

DEK TQ

5 sec
Max. PCB size: 400 x 400 mm



GENERAL CHALLENGES IN HIGH-MIX PRODUCTION

Flexibility?

New NPI's and products getting more complex so the printer should be flexible in adding or retrofit options at any time



Fast setup and changeover?

The NPI setup has to be fast and the change over time very low to maximize throughput



Maintain print quality of mixed components?

The mix of big and small components, also close to the PCB edge, offers special challenges to maintain a high-quality print process



Automation to minimize operator intervention?

A print process can easily drift and get out of control by missing automation and pure operator knowhow



Problem at data exchange with printer?
SMT line fully integrated
into production environment



DEK NEOHORIZON – AT A GLANCE

Performance



6,5 to 8 seconds Core cycle time ~ 250 PCB's/h**

Accuracy



+/- 20-25 μm @ 2 CpK Wet Print* (+/-12,5 μm @ 2 CmK)

Print Area



up to 620X x 508Y (1-stage)

Productivity



from very high flexibility to highest productivity

Print Quality



Flexible clamping, Close loop to SPI

Costs & Automation



Easy changeover and automated process via ProcessExpert



** : 250x250 board (265Test1), USC every 2nd print

DEK NEOHORIZON OVERVIEW



	E by DEK	DEK NeoHorizon 03iX	DEK NeoHorizon 01iX
Machine Alignment Capability @ 2.0 CmK	+/- 12.5 µm	+/- 12.5 µm	+/- 12.5 µm
System Alignment Capability @ 2.0 CmK	+/- 25 µm	+/- 20 µm	+/- 15 µm
Wet Print Capability @ 2.0 CpK – AVS Certified		+/- 25 µm	+/- 20 µm
Core Cycle Time	11 sec	8 sec	6,5 sec
Standard Transport System	Single stage	Single stage	3 stage
Under Stencil Cleaner (USC)	IUSC	IUSC (Cyclone optional)	Cyclone
USC Side channel blower vacuum system	~18 Litre/min	25 Litre/min	35 Litre/min
Side clamping (snugger)	Option	Option	Option (single stage)
All Purpose Clamping (APC)		Option	Option*
Verification max. 750mm²/sec	Option	Option	
Verification max. 1700mm²/sec		Option	Standard
Grid-Lok®	Option	Option	Option
Stinger	Option	Option	Option
Verification & Traceability	E- Series only	Option	Option
Close loop to SPI (ProDEK)	RFQ	Option	Option

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The best print process quality out of one hand - ASM

MAXIMUM FLEXIBILITY FOR YOUR PRINT REQUIREMENTS



Fully flexible and software-controlled
PCB clamping

The software controlled and fully flexible „All Purpose Clamping“ APC offers always to perfect clamping for your print requirement



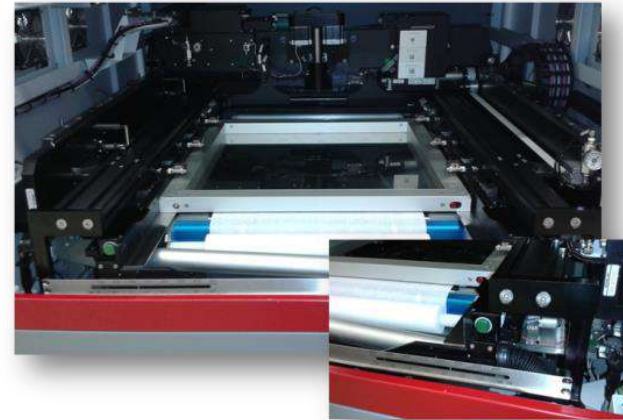
Benefits

- The flexible APC offers always to perfect clamping for your print requirement
- Snugger force and OTT pressure configurable and close loop controlled.
- Fully software controlled
- APC Setup and parameter saved within the product file

Available clamping modes selectable:

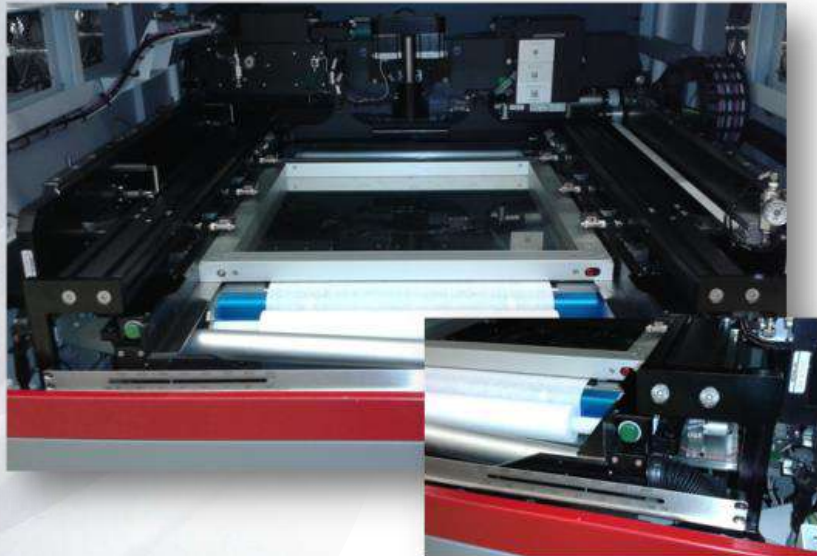
1. Full OTS Mode (clamp → snug → retract)
2. DEK Over the Top Clamping (OTT)
3. Combo mode

MAXIMUM FLEXIBILITY FOR YOUR PRINT REQUIREMENTS



Flexible stencil loading for frames and sizes up to 29" (736mm)

The flexible adjustable stencil mount offers an easy way to load all stencil types from 12" (305mm) up to 29" (736mm)



Easy to use adjustable stencil width mount offers:

- Possibility to load stencil frames from 12" (305mm) to 29" (736mm) width
- Very fast stencil changeover time
- No stencil adaptor required

Features

- Fully adjustable chase and easy to adjust design
- Frame thickness from 20mm to 38mm
- New mechanical clamping without string

Semi- or fully automatic stencil loading and positioning

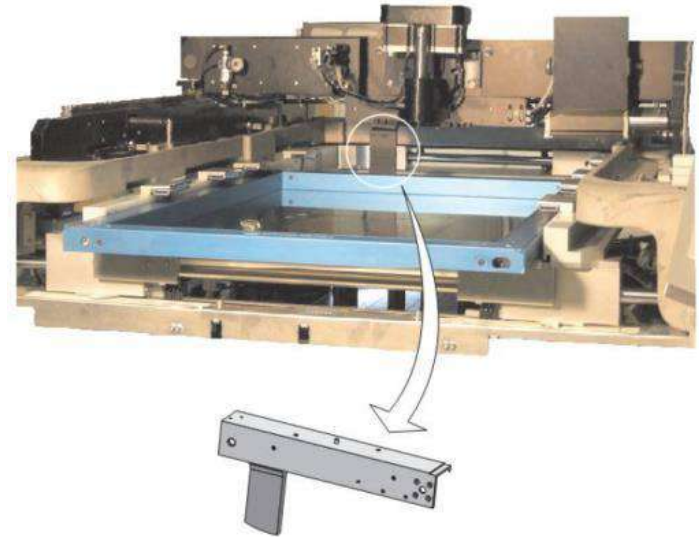
- No manual stencil depth adjustor
- Loading and Unloading stencil to a pre-programmed position at your fingertip

Semi automatic stencil loading

- Very fast stencil load and positioning
- Print carriage mounted paddle move to correct position for operator to load stencil manually and push against the paddle

Fully automatic stencil loading

- DEK Auto Stencil Load (ASL) detects and fully automatically load stencil to a pre-programmed position
- Very safe and secured positioning without any operator influence
- No operator adjustments needed



MAXIMUM FLEXIBILITY FOR YOUR PRINT REQUIREMENTS



More than 60 productivity options available to meet your print requirements

Almost all productivity options are available also for retrofit to meet your future requirements

INTERESTING PRODUCTIVITY OPTION: TEMPERATURE CONTROL MODULE (TCM)

Improved (stable) Print Quality

- Consistent print definition as paste will not slump as fast
- Reduced „bleed through“ at stencil to board gasket
- Improved performance with less false alarms at Solder Paste Inspection (SPI)

Less under stencil cleaning

- Less usage = more consistent print process
- Cost benefit due to less fabric consumption

Increased throughput and less operator intervention

- Less USC cleaning will give more throughput
- Less operator intervention, parameter adjustments and roll exchange will minimise down time

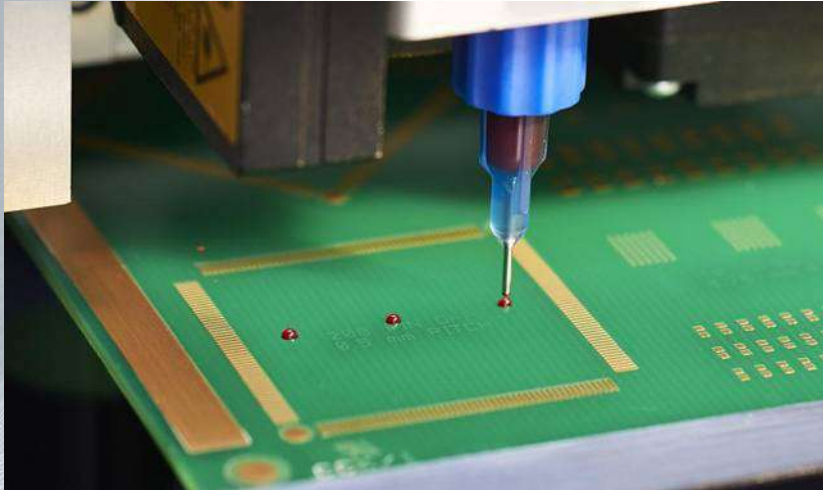


Top mounted TCM



Floor mounted TCM
(separate unit)

INTERESTING PRODUCTIVITY OPTION: DISPENSING UNIT STINGER



DEK Stinger is designed to dispense adhesive or paste dots:

- Pre-programmed pattern onto a PCB sequentially
- Dispensing right after the paste printing process has finished
- Stinger is mounted to the camera axis to reach all possible dispense positions
- High accurate Laser sensor is measuring “zero” height of PCB for high dot repeatability

Dispensing through a patented auger valve

- gives repeatable dots volume using the same dispensing parameters
- Easy to change auger valve system
- No cleaning of auger valve as one-time usage

The DEK Squeegee Drip Tray

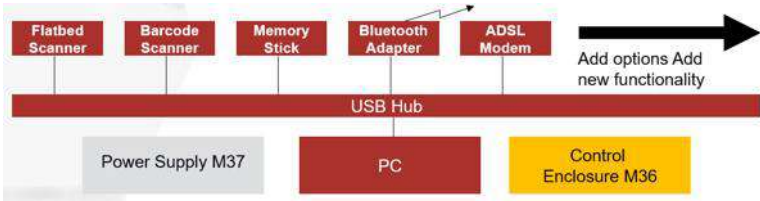
drastically reduce the contamination with solder paste by dropping from the squeegee into the printer

Its extended and retracted at suitable times

- during the product changeover routine
- when squeegees are moving up



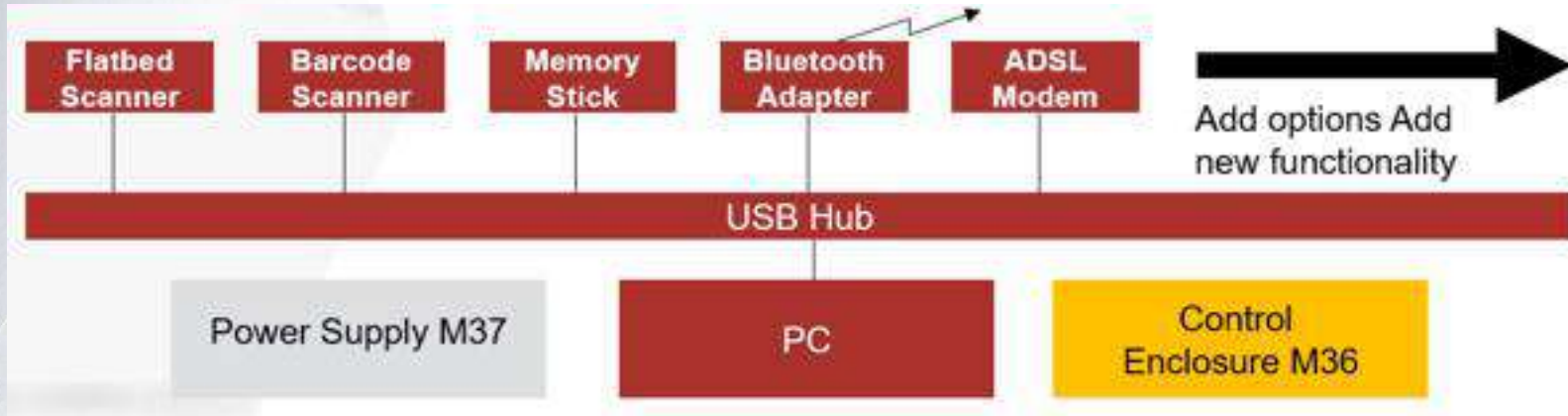
Maximum flexibility for your print requirements



Intelligent iScan network offers easy scalability and Power monitoring

Scalable functionality offers plug in option configuration and easy predictive maintenance

INTELLIGENT SCALABLE CONTROL AREA NETWORK (ISCAN)



The scalable network functionality of iScan offers plug in option configuration

- Future Proofed System Design with faster processing capability
- Advanced communication improving flexibility and reliability
- Innovative diagnostic and predictive maintenance tools that optimize service strategy

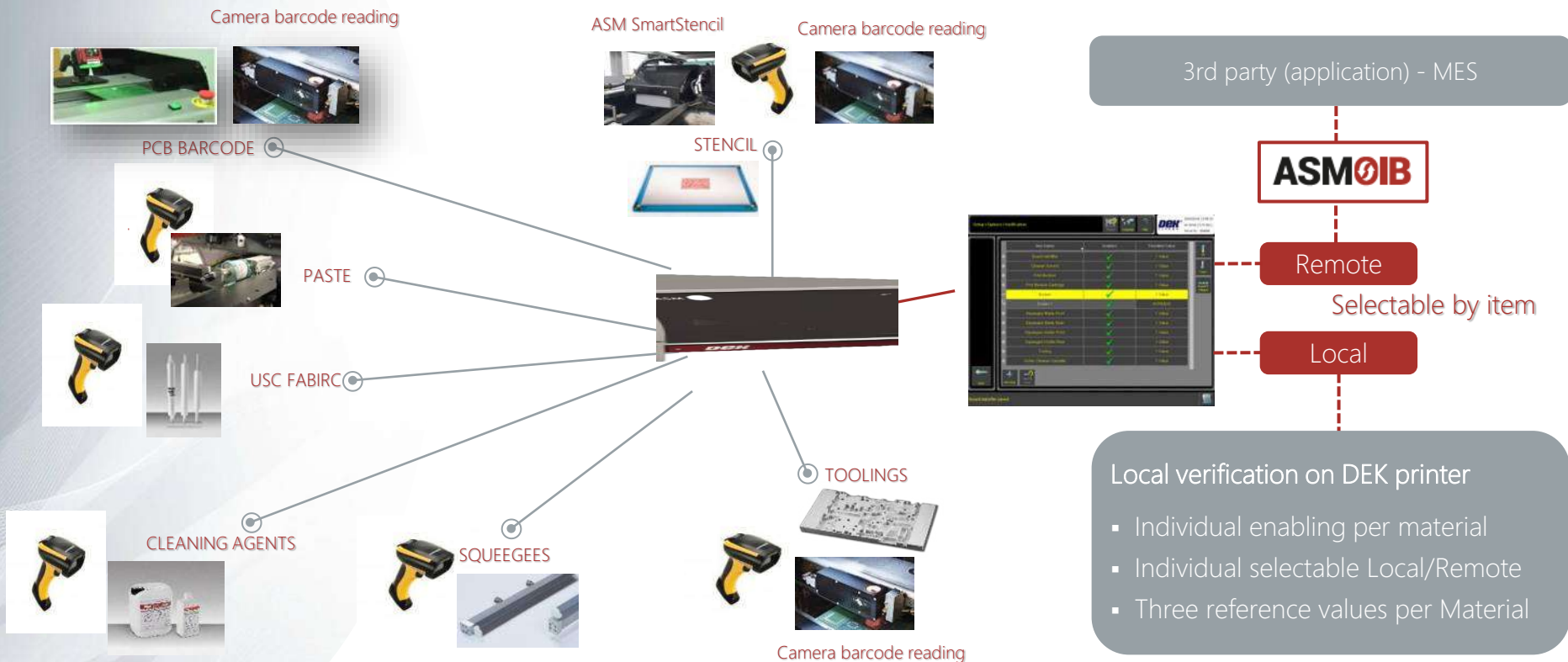
MAXIMUM FLEXIBILITY FOR YOUR PRINT REQUIREMENTS



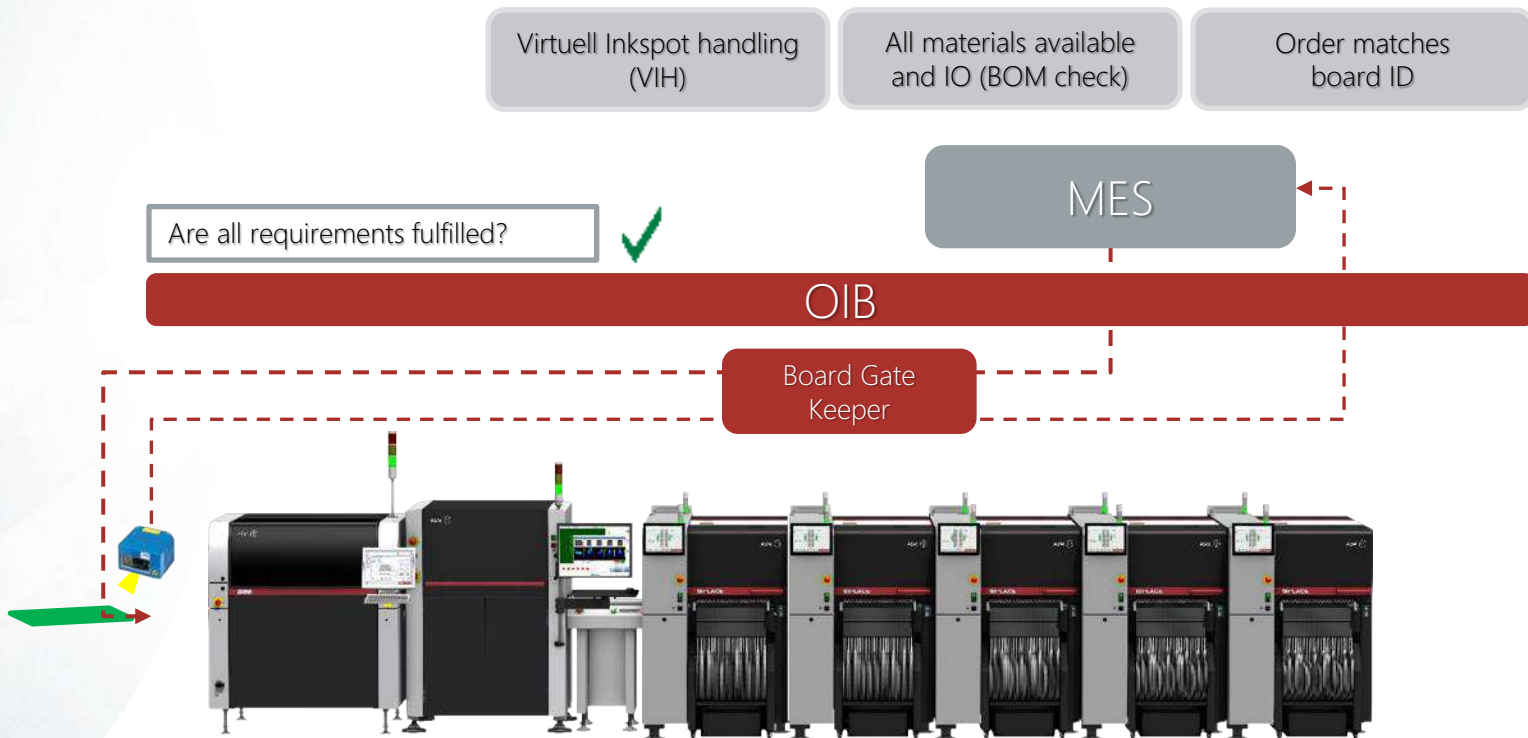
Full verification and traceability of print materials directly or via MES

DEK Verification & Traceability offers the full tracking of print materials, PCB barcodes and stencil ID via SmartStencil or camera barcode reading

DEK VERIFICATION & TRACEABILITY OF PRINTER MATERIALS



V&T - MES BOARD INTERLOCKING



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High performance offers a top throughput

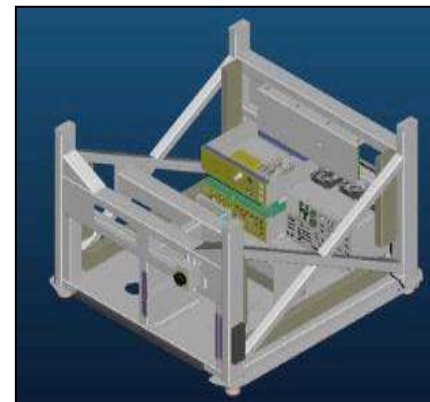
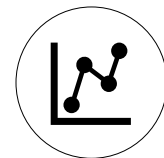


Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

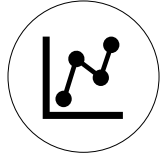
MAXIMIZING YOUR PRINT PROCESS QUALITY TO MAXIMUM YIELD



Solid base for high accuracy printing
combined with maximum accessibility

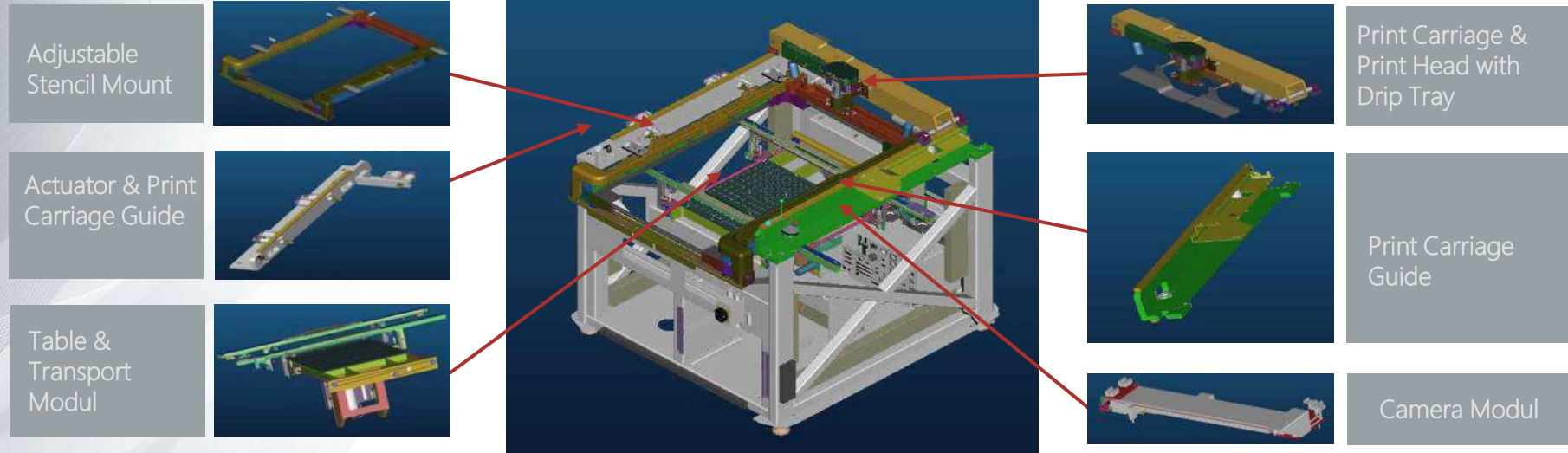
The modular and solid frame design offers maximum
print accuracy and maintenance

THE MODULAR AND SOLID FRAME DESIGN

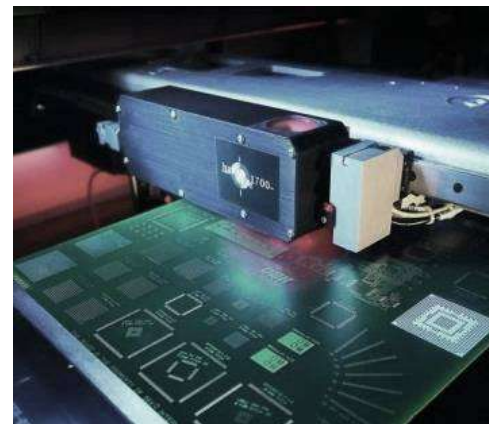
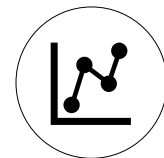


The modular frame design of the DEK NeoHorizon offers

- Solid base for high end accuracy printing
- Maximum access to components for maintenance
- Offers flexible, fast state of the art production



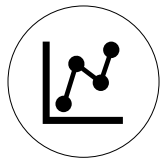
MAXIMIZING YOUR PRINT PROCESS QUALITY TO MAXIMUM YIELD



Very fast and easy to use high speed paste inspection Hawkeye

DEK Hawkeye offers a very fast and simple to setup print inspection up to 1.700 mm²/sec

HIGH SPEED INSPECTION DEK HAWKEYE (HE)



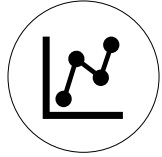
DEK high speed Hawkeye paste inspection

- inspects the board for the most common and critical print defect: missing paste
- With a very high speed up to $1.700 \text{ mm}^2/\text{sec}$
- and an easy setup and usage for the operator
- It runs in the background and stops the printer if print errors are detected only

Two HE versions with different FOV available:

- HawkEye 750 = up to $750 \text{ mm}^2/\text{sec}$
- HawkEye 1700 = up to $1.700 \text{ mm}^2/\text{sec}$
- Standard option on DEK NeoHorizon 01iX

HIGH SPEED INSPECTION DEK HAWKEYE



PASS

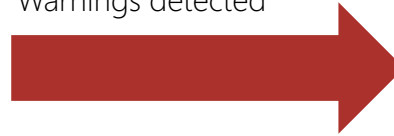


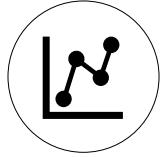
- No defects
- One warning

FAIL

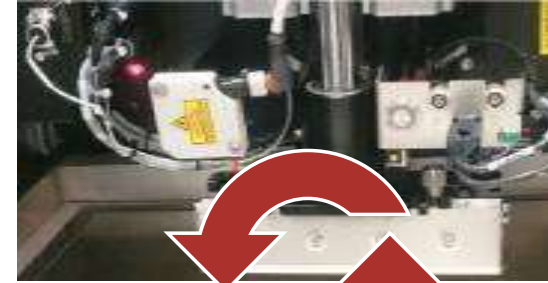


- Defects detected
- Warnings detected



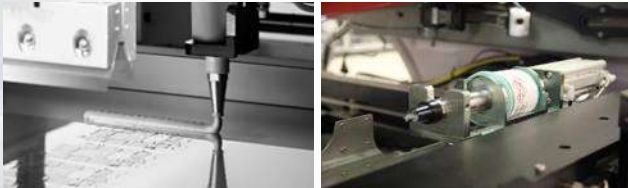
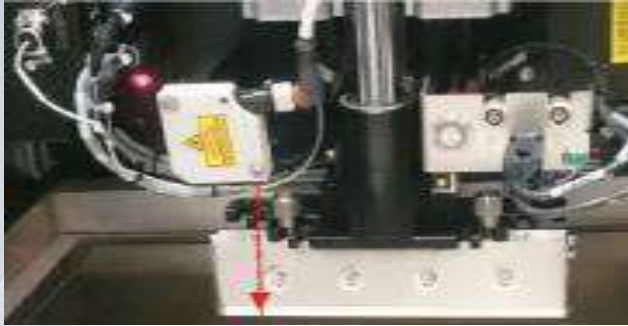
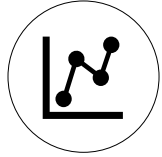


MAXIMIZING YOUR PRINT PROCESS QUALITY TO MAXIMUM YIELD



Ensure a high-quality printing process by
closed loop paste control

Closed loop system for fully automatically
paste replenishment and monitoring



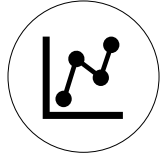
DEK Print Material Management

- Closed loop system for fully automatically paste replenishment and monitoring
- Good control of paste volume on stencil
- Ensure a high quality and yield printing process
- Much reduced operator interventions

DEK print material management includes

- Measuring Paste roll height monitor
- Automatic paste dispenser or automatic Jar dispenser

DEK PRINT MATERIAL HEIGHT AND VOLUME MEASUREMENT



DEK Paste Roll Height Monitor 2 offers

Accurate measuring of paste Roll height and volume

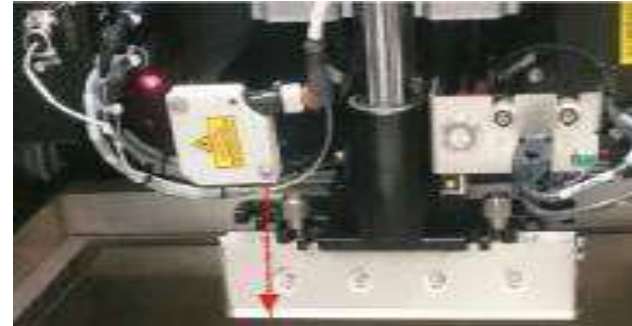
Full software configuration

Multiple thresholds for

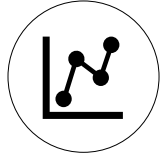
- Maximum paste height
- Waning minimum paste height
- Minimum paste height

No restrictions on

- Squeegee type, length & angle
- Paste drip dray
- Stencil size or frame system

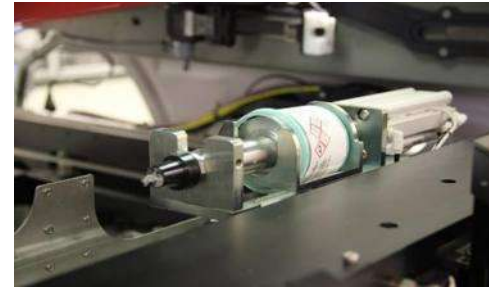


DEK PRINT MATERIAL REPLENISHMENT



Automatic cartridge dispenser

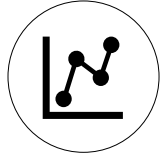
- The DEK APD dispenses a print media on a stencil automatically out of a syringe type cartridge
 - Selectable cartridges ~600g or ~1.2kg
- User-friendly quick replenishment and changeover



Automatic jar (pot) dispenser

- The DEK Solder Jar Dispenser dispenses a print media on a stencil automatically out of "standard" pot's or jar's
- User-friendly quick replenishment and changeover due to two adjustable plunger

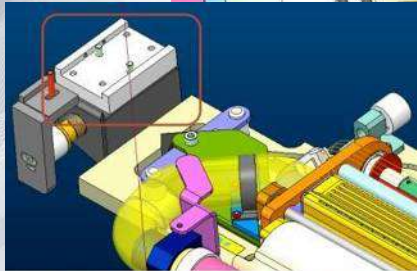
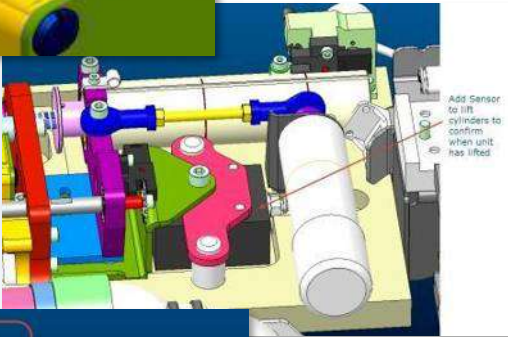
MAXIMIZING YOUR PRINT PROCESS QUALITY TO MAXIMUM YIELD



Best cleaning results assure maximum process quality from flexible sizes to at lowest cleaning time

DEK under stencil cleaning solution offers best cleaning performance, from flexibility to max. speed

ENHANCED CYCLONE USC



Cyclone, now has better mounting which has the effect of making the unit more stable during operation and therefore less likely to drop during clean cycle

Cleaning plenum, combination design

- Combination design of iUSC and Cyclone cleaning plenum

Changeable cleaning length

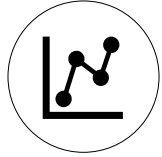
- 300mm, 400mm, 460mm & 520mm
- Reduction of TCO by easy change of sizes & fabric in minutes

Spray bar isolated from cleaner assembly

- Easy cleaning of blocked solvent dispense holes outside the printer

Various mechanical improvements for higher robustness

- Additional sensor to confirm when unit has lifted
- Better mounting of cleaner pick-up magnets to increase reliability



The flexible IUSC cleaner

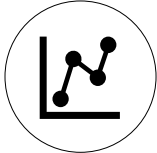
- Reduction of TCO by easy change of sizes & fabric in minutes (300mm, 400mm & 520mm)
- Easy maintenance and cleaning
- Single vacuum take off with "dual performance"
- Spray bar embedded in wiper assembly



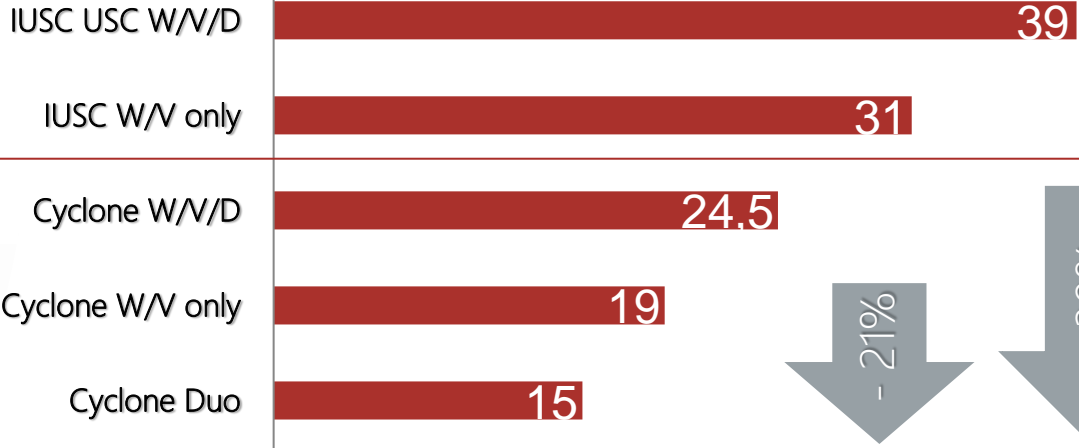
The high speed cleaner Cyclone

- Higher throughput by significantly reduction of cleaning time
- Cassette system minimizes fabric roll change over times
- DUO option offers WET / VAC & DRY with only one sweep
- Easy changeover among 300/400/500mm cleaning width

COMPARISON OF DEK USC CLEANING TIMES



Cleaning time comparison in sec

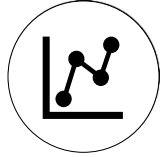


- 21%

- 39%

- 61%

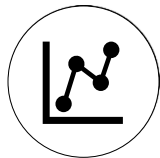
MAXIMIZING YOUR PRINT PROCESS QUALITY TO MAXIMUM YIELD



Multiple board support solutions available to always offers the best solution for your print

The available board support solutions offer the perfect support from save and quick changeover to maximum flexibility

BOARD SUPPORT SOLUTIONS FOR PERFECT PRINT AND MAX FLEXIBILITY



Dedicated Tooling for perfect print quality and very fast job change

- Best possible board support for maximum print quality
- Vacuum tube connection very simple by magnet
- Easy changeover
- Easy to order within 3-5 days from the ASM stencil & tooling network



Maximum flexibility with ASM Grid-Lok tooling

- Fully integrated and controlled by the printer software
- Easy and flexible changeover
- Minimal Operator dependency
- Repeatable Support

DEK standard height of 81mm

- Existing DEK dedicated tooling solutions can be used



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Maximizing your print process quality



Certified wet print accuracy as standard



High performance offers a top throughput

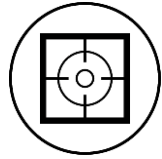


Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

DEK RELATIVE ALIGNMENT SUPPORTS VERY HIGH ACCURACY



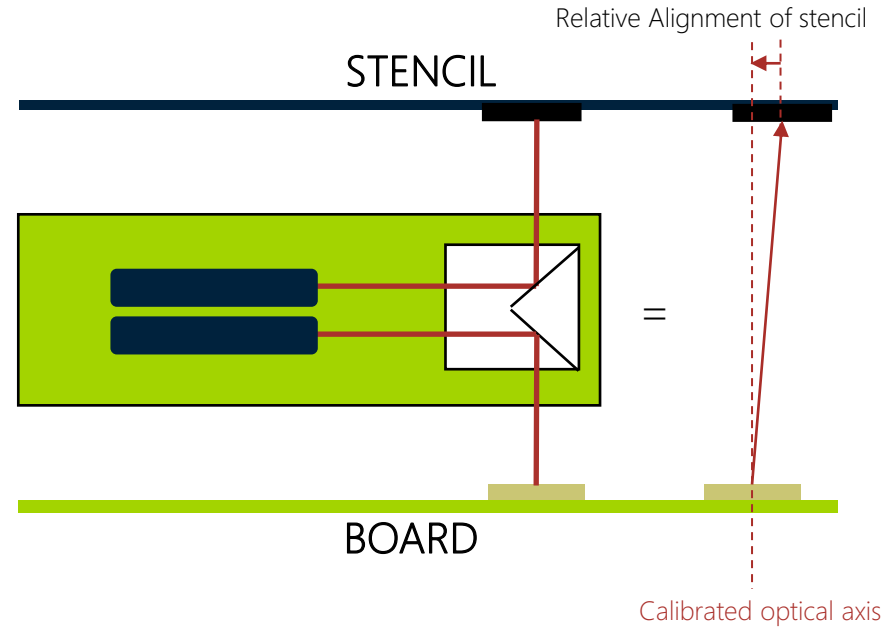
High accuracy vision alignment assure long term accuracy

Automatic and precise learning of synthetic fiducials down to 0,3mm

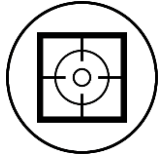
Individual lighting levels for each fiducial

Calibrated camera measures offset between stencil and board relatively

Long time accuracy due to non mechanical influence



CERTIFIED PRINT ACCURACY USING EXTERNAL AVS SYSTEM BY STANDARD



Certificate for Machine Accuracy

ASM AS Service

Machine Capability Test

Machine type: NeoHorizon D10X
Serial number: --315127
Inventory number: -
Line: ASM AS (PRS) Production
Testing date: Thu, Aug 24, 2017

ASM AS PRS Weymouth
Weymouth UK, ASM AS PRS Production
Production: Barnes, Jane
Albany Road Weymouth
DT4 9TH Dorset UK
United Kingdom

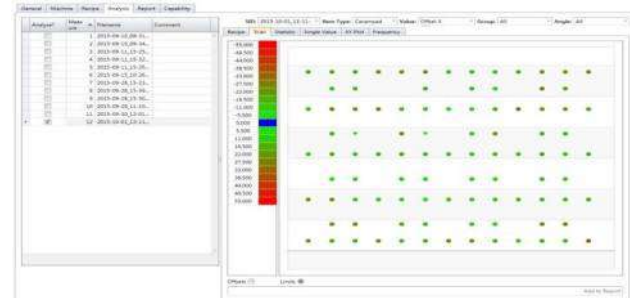
ASM Assembly Systems GmbH
& Co. KG
ASM AS PRS Production
Albany Road Dorset
DT49TH Weymouth
UK

Signature

Signature



- Test involves printing glue dots onto a calibrated glass plate and measuring the X & Y offsets print to print
- Theta deviation measured
- Certificate produce to verify the performance of every machine after build
- Industry recognized verification tool to prove machine capability
- Delivery with every DEK NeoHorizon printer as standard already!!!



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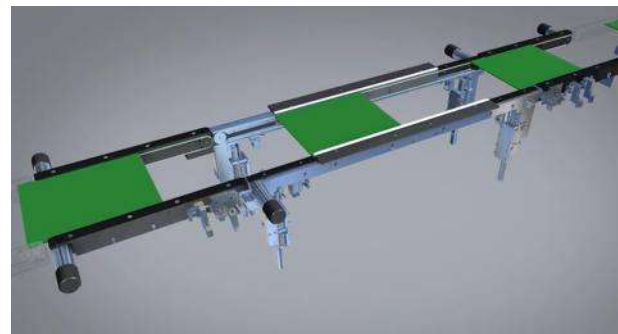
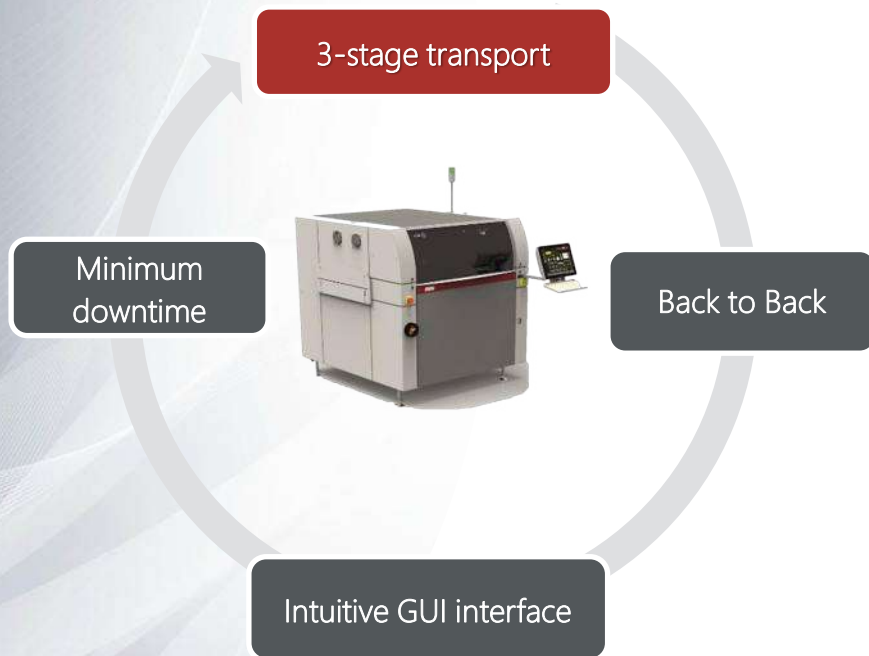


Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

FLEXIBLE PERFORMANCE OFFERS A MAXIMUM REQUIRED THROUGHPUT



DEK 3-stage conveyor offers maximum throughput and lowest cycle times

The DEK 3-stage transport offers lowest cycle eliminates communication time to external conveyors

DEK HIGH THROUGHPUT CONVEYOR (HTC) INCREASES THROUGHPUT



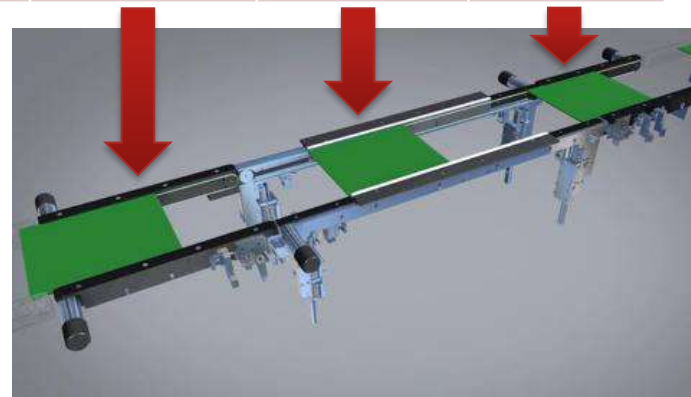
DEK HTC offers lowest cycle times and maximum throughput

- Increases machine throughput
- Improve the core cycle time by 1 second
- no interface delay due to communication time

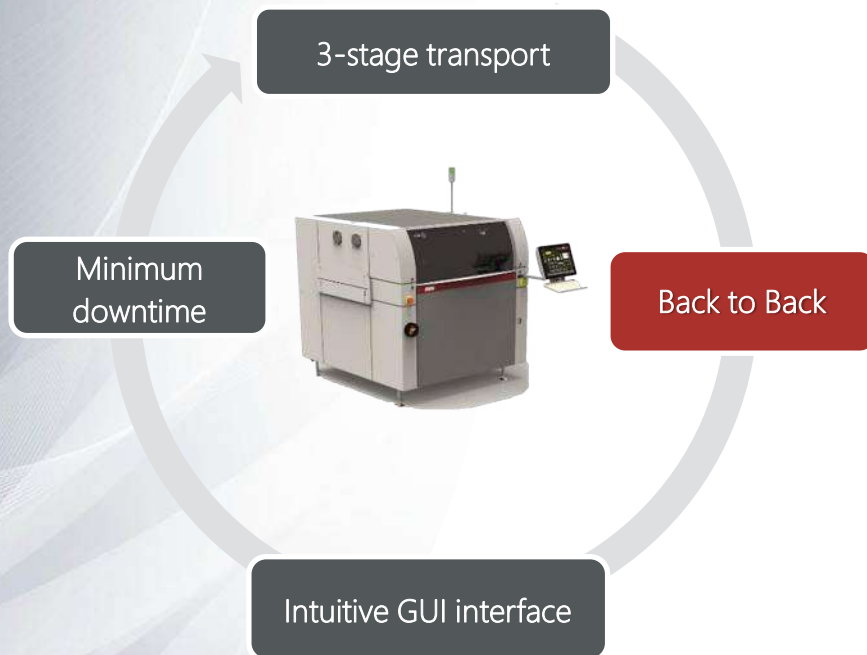
DEK HTC can be used in:

- in single (up to 510 mm board, 620mm optional)
- three stage mode (370mm board)
- XHTC mode (510mm boards) designed by SOKO

Transport mode	Stage 1	Stage 2	Stage 3
Single stage mode	510mm		
3-stage mode	370mm	510mm	370mm
XHTC SOKO	510mm	510mm	510mm



FLEXIBLE PERFORMANCE OFFERS A MAXIMUM REQUIRED THROUGHPUT



Back to Back (B2B) offers increased floor space performance and flexibility

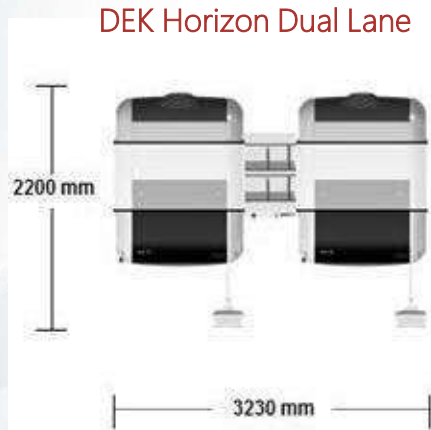
DEK NeoHorizon B2B reduces the line length by 38% and reduces the required production area by 19%



DEK NEOHORIZON BACK 2 BACK OFFERS BETTER MAXIMUM PERFORMANCE

The B2B setup offers higher throughput using less production floorspace

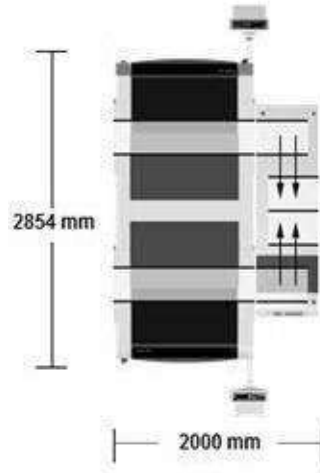
- 38% less line length
- 19% less production area required



Production area = 7 m²

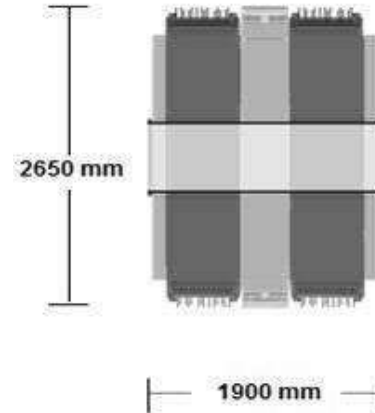


DEK NeoHorizon B2B



Production area = 5,7 m²

Comparison:
SIPLACE X4s



DEK Modular print platform: NeoHorizon for dual lane configurations (up to 508 mm width per lane)

- Functionality

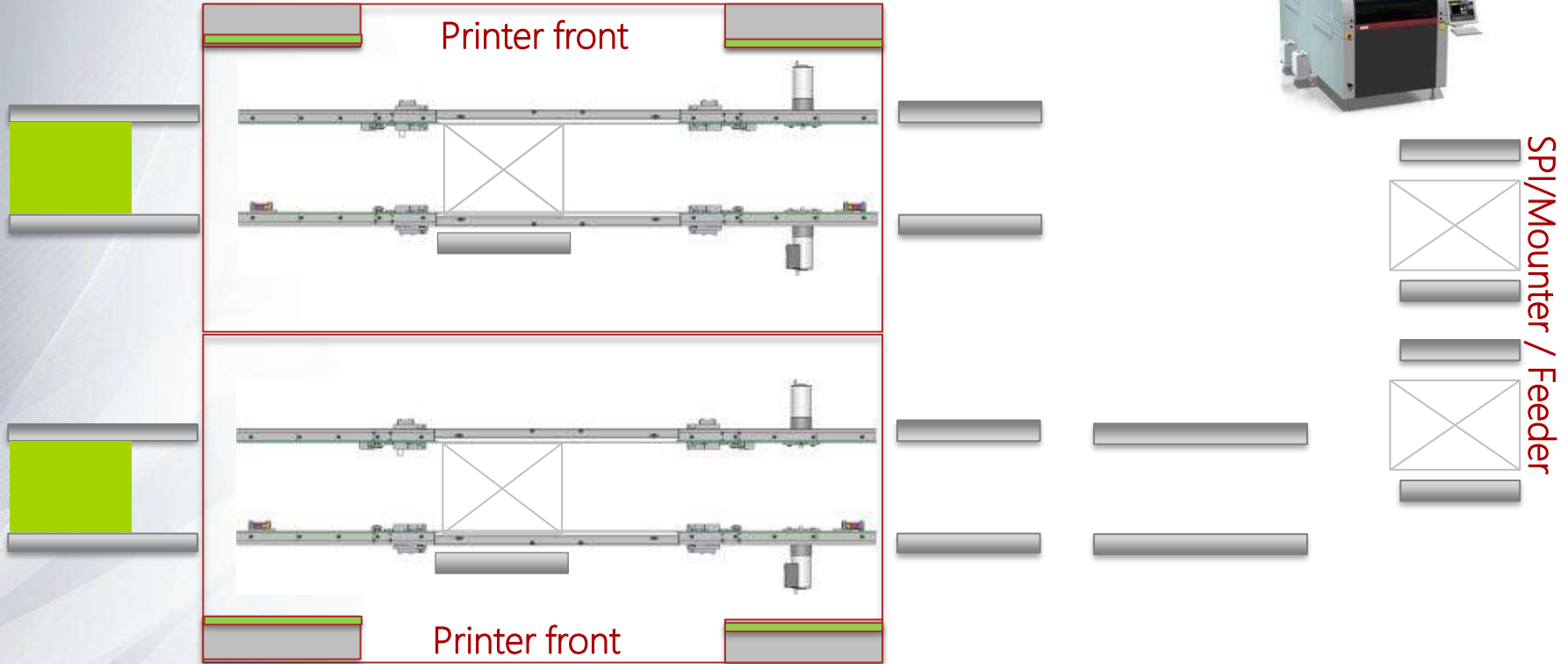
1. Quickly and easily to be two single machines
2. Enables smart and efficient use of capacity by deploying machines to capacity-deficient lines – enables cost effective production line efficiency – improving the bottom line
3. DEK Instinctiv Software
4. Future proofed compatibility with all existing DEK Horizon print platforms
5. Seamless integration – line compatible with major equipment vendors
6. Allows printer to be moved out of line quick and easy



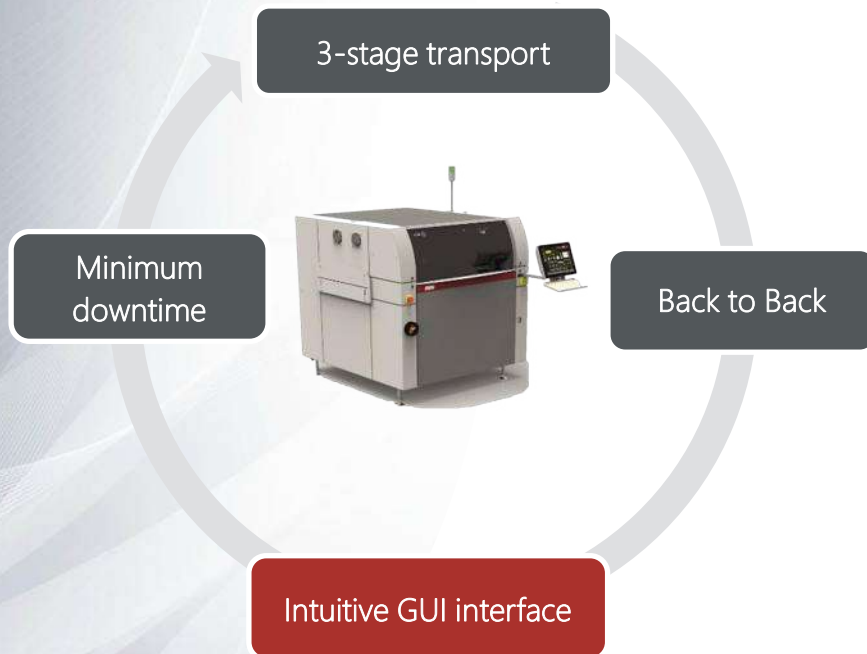
Benefits

- Two independent printer with full print area up to 510 X 508 mm
- Can be used as two single machines as well
- Process capability, PAC of $\pm 15\mu\text{m}$ @ 2 Cpk

DEK Modular print platform: NeoHorizon for dual lane configurations (up to 508 mm width per lane)



FLEXIBLE PERFORMANCE OFFERS A MAXIMUM REQUIRED THROUGHPUT



The DEK V9 station software is very intuitive to program and operate

With the intuitive graphical V9 touchscreen interface operator needs almost no training and a new product can be programmed within less 2min

DEK V9 STATION SOFTWARE IS VERY INTUITIVE TO PROGRAM AND OPERATE



The DEK V9 station software is

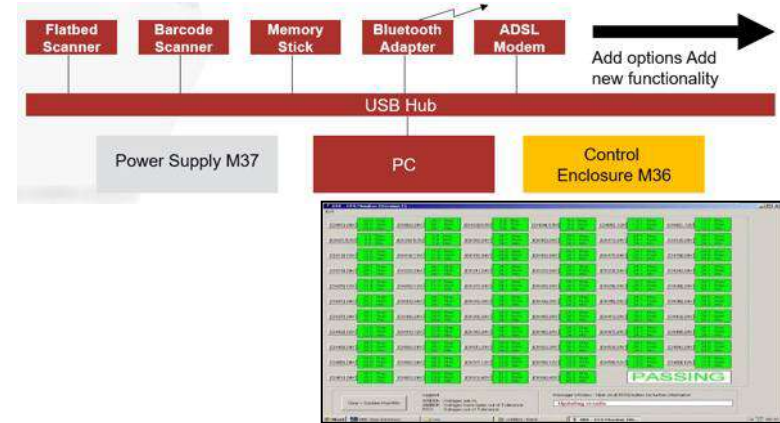
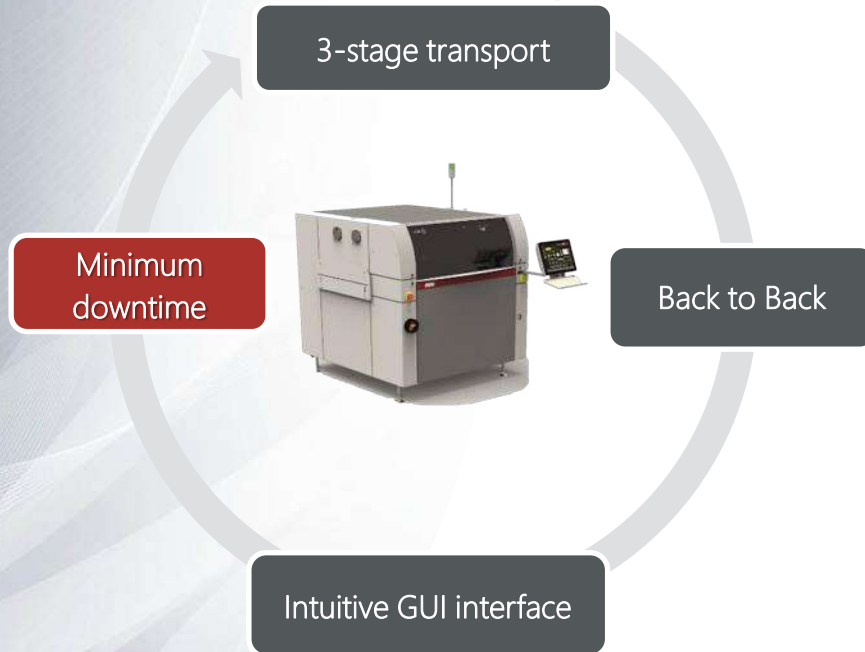
- Easy to use interface via touch screen
- **Fast product set up within 1-2 minutes**
- Easy product changeover
- Icon based print parameter support

it offers

- Language neutral, fully icon-based usage
- On board error recovery, graphical help and tutorials
- Real time consumable management
- Notification history readily available
- Important operator commands always available
- Intuitive operator guidance with full screen feedback



FLEXIBLE PERFORMANCE OFFERS A MAXIMUM REQUIRED THROUGHPUT



Intelligent iScan network reduces downtimes
by Power monitoring

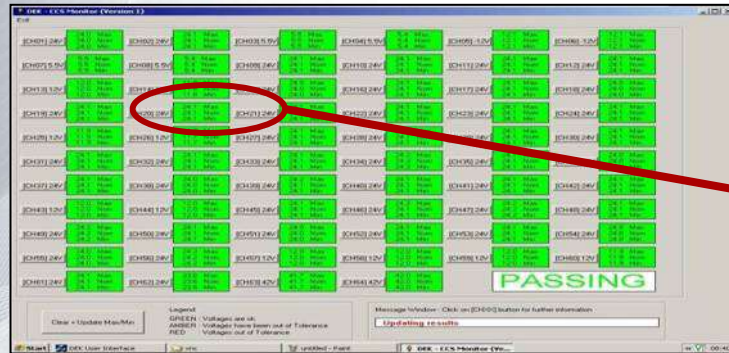
Scalable functionality offers plug in option configuration
and easy predictive maintenance

ISCAN VOLTAGE CHECK – MAINTENANCE TOOL TO DRASTICALLY REDUCE DOWNTIME



Massive reduction of MTBF time due to preventive and scheduled maintenance

- System keeps on monitoring voltage automatically
- Bad voltage is shown by color indication



Agenda



Introduction



Maximum flexibility for your print requirements



Maximizing your print process quality



Certified wet print accuracy as standard



High performance offers a top throughput



Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM



Fully automation and optimization keeps the process under control and offers max. yield

ASM ProcessExpert is the only working system on the market which is fully automate and optimize the print process already before the NPI on the line

FULL INTEGRATION OF DEK NEOHORIZON INTO ASM PROCESS EXPERT



ASM Process Expert

- Automate the printing process
- Optimize the printing process
- Minimizes operator interventions as PE is fully controlling the DEK printer



ASM ProcessLens



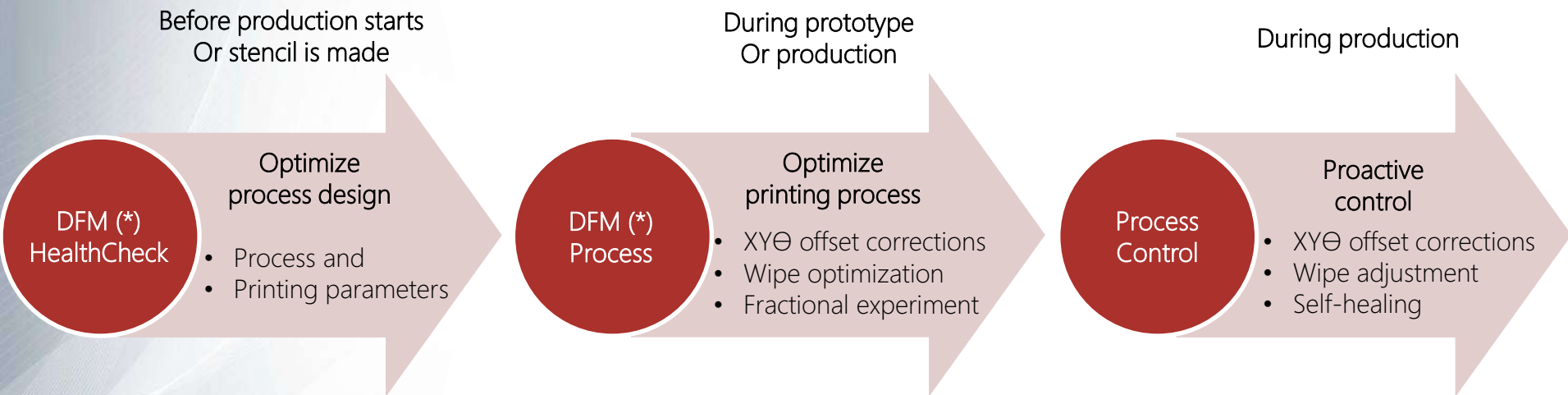
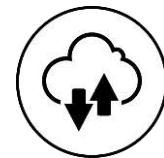
ASM ProcessEngine

+



DEK printer

ASM PROCESS EXPERT AUTOMATE, OPTIMIZE AND CONTROLS THE PRINT PROCESS



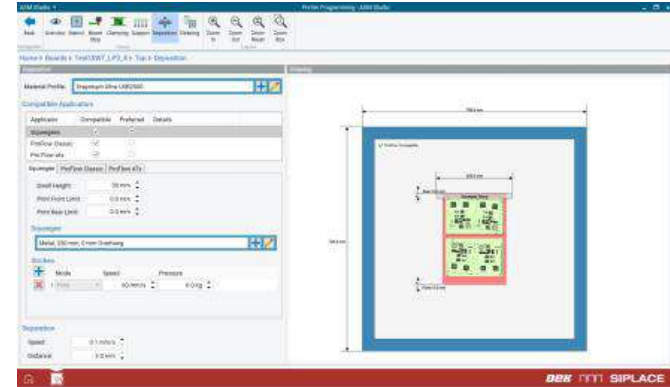
(*) DFM: Design for Manufacturing

Stabilization

Automated optimization

Proactive control

PERFECT AUTOMATION AND INTEGRATION INTO THE INTEGRATED SMART FACTORY



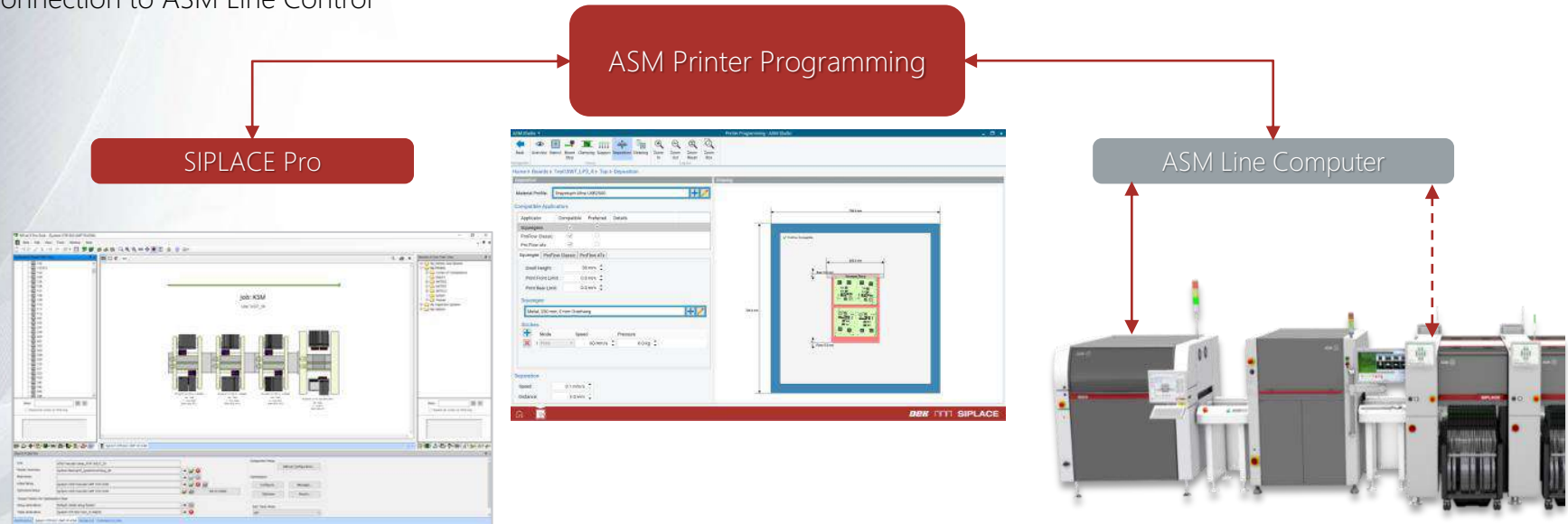
Full offline programming of the DEK printer inline with the SIPLACE with a minimal add-on work and time

ASM Printer programming is using all SIPLACE pro information and is simple to use by adding printing information by libraries

EASY PRINTER OFFLINE PROGRAMMING FOR ASM LINE USERS



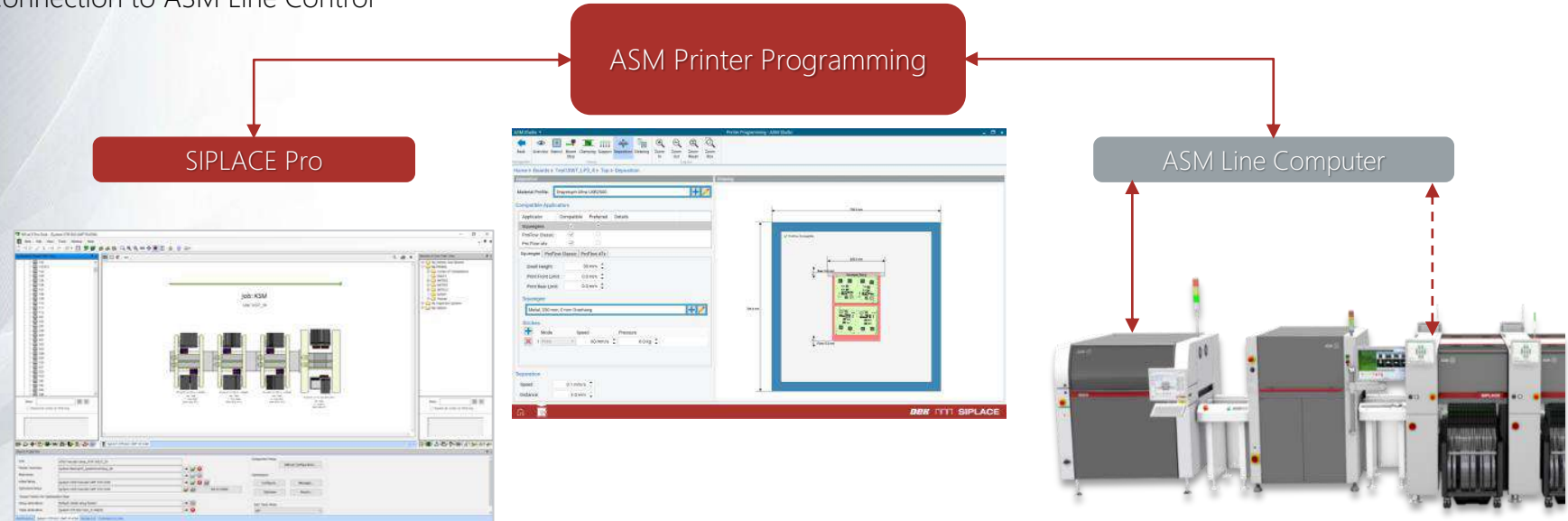
- One data preparation from DEK printer to SIPLACE
- Central product and change management
- Connection to ASM Line Control



EASY PRINTER OFFLINE PROGRAMMING FOR ASM LINE USERS



- One data preparation from DEK printer to SIPLACE
- Central product and change management
- Connection to ASM Line Control





Close loop interface to almost all SPI systems on the market with corrections based on statistical data and DEK knowhow

The ProDEK interface is getting the results (based on defined limits) from SPI and is using a statistical approach of optimization, based on DEK knowhow

INTERFACE TO EXTERNAL SPI'S: PRODEK



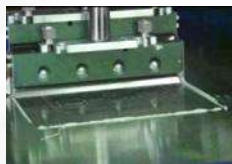
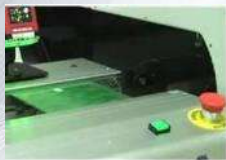
ProDEK closed loop interface to third party SPI's

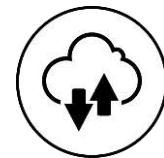
- makes decisions on statistical data based on DEK knowhow
- ProDEK just uses the SPI input as a base
- DEK takes care of the printer adjustments and not the SPI directly

Close loop interface to SPI systems to optimize

- Board batch offset correction
- Optimise under stencil cleaning rate
- Barcode or Barcodeless capable
- Also for Dual lane available

All common SPI vendor got interface specification





Standardized open interfaces for horizontal and vertical data exchange offers an easy integration into your IT environment

Easy and standardized interfaces a key for easy integration and data exchange for the Smart Factory

DESIGNED TO FULFIL THE FUTURE DEMANDS OF THE SMART FACTORY



Open interfaces to ASM systems and other equipment

- ProcessExpert, ASM Printer programming
- MES connection via OIB
- Close loop to SPI

Line Level
Verification & Traceability, Programming, Validation
Traceability, Setup, Changeover

Connectivity
Easy Integration

Shop floor / Equipment Level
Smart Equipment, Automation



ASM OIB



IPC-HERMES-9852

Agenda



Introduction



Maximum flexibility for your print requirements



Maximizing your print process quality



Certified wet print accuracy as standard



High performance offers a top throughput

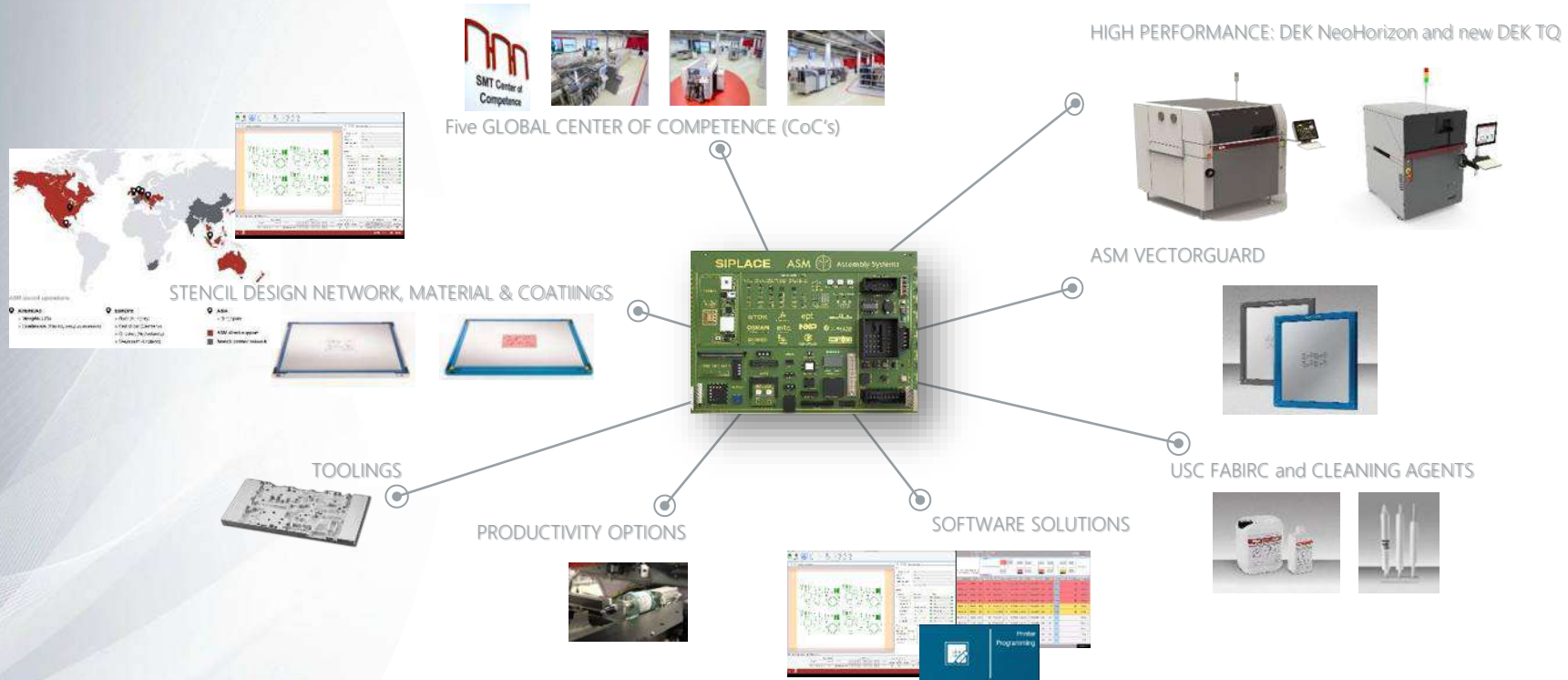


Perfect integration into the Integrated Smart Factory



The best print process quality out of one hand - ASM

THE PERFECT PRINT PROCESS QUALITY OUT OF ONE HAND - ASM



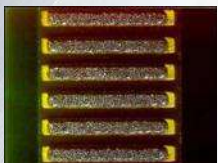
The complete printing solution out of one hand are essential for perfect print process and best yield

DEK NEOHORIZON – FLEXIBLE PERFORMANCE FOR THE INTEGRATED SMART FACTORY

Maximum flexibility, always the perfect configuration for your print requirements



Maximizing your print process quality to max. yield



Perfect integration into the Integrated Smart Factory



Certified wet print accuracy as standard, for perfect quality of your print process



High performance in single and B2B offers a top performance



ASM



THANK YOU

Gianluca Garbellini

**Together
#1**